

# Notice of Allowability

Application No.

10/075,733

Examiner

Krishnan S Menon

Applicant(s)

BEHRENDT ET AL.

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/4/04.
2. ☒ The allowed claim(s) is/are 1-11, 13-23, 25-26, 42-44 and 47; RENUMBERED 1-28.
3. ☒ The drawings filed on 14 February 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Bernard Lau on 10/21/04.

The application has been amended as follows:

The Specification is amended as follows:

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In page 7 paragraph 0017, delete: [[Figure 1 shows]]; add: Figures 1a - 1d show

In page 7 paragraph 0018, delete: [[Figure 2 shows]]; add: Figures 2a - 2c show

In page 8 paragraph 0019, delete: [[Figure 3 shows]]; add: Figures 3a - 3d show

In page 8 paragraph 0021, delete: [[Figure 5 shows]]; add: Figures 5a and 5b show

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### ***Allowable Subject Matter***

Claims 1-11, 13-23, 25-26, 42-44 and 47 are allowed.

The following is an examiner's statement of reasons for allowance:

The closest prior art is Jha (US 6,524,481). Independent claim 1 as amended includes limitations to the packing density of the hollow fibers and the radial segmental

elements, which are not taught by the reference. Amended claim 1 now has a narrow definition of the packing space, and the packing density is the fiber volume as a percentage of this packing space. Even with this definition, the packing density could still overlap the packing density of the Jha ref. However, this overlap at best could only be in a very narrow lower end of the large range (5-70%) taught by Jha, thus would not meet the "sufficient specificity" requirement according to MPEP 2131.03, and therefore, the reference does not anticipate the claim. The reference also teaches that a lower packing density would be undesirable, which would also make the claim non-obvious over the reference. It would be not obvious to one of ordinary skill in the art at the time of invention to combine this reference with any other to arrive at the claimed invention because there are no references found that teaches a low packing density as desirable because of unfavorable cost. The reference also does not teach a radial segmentation element as claimed. US Patent 5,282,964 to Young teaches such segmentation element. However, this reference teaches tube-side feed and high packing density, and the segmentation element in this reference is provided for improving the shell-side counter-current flow of permeate, and therefore, would not provide a motivation to combine with the Zha reference.

Rest of the claims are allowable because they depend from claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Krishnan Menon  
Patent Examiner

  
W. L. WALKER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700